COMMENT AND OPINION

A rose is a rose

"A high degree of intelligence, tact, imagination, and resourcefulness coupled with such a background of education, professional training, and experience will enable the medical librarian to administer a library efficiently and to assist readers in the use of the bibliographic and other materials of his collection." Thus Judith W. Hunt describes the attributes of the medical librarian in the first edition of *A Handbook of Medical Library Practice* published in 1943 [1].

The description of the medical librarian is developed further in the third edition, published in 1970. Bernice M. Hetzner outlines the qualities needed for successful practice, starting with the importance of having certain fundamental knowledge, the understanding of ways in which scientists use literature, the value of research, and a deep appreciation of scholarship. And to that description she would add an enormous curiosity, the compulsion to satisfy that curiosity, and a willingness to solve problems and to stay with a problem until it is solved. Librarians must be good teachers, both for their staff members and for users; be able to speak and write clearly and effectively; and relate well with people inside and outside the institution [2]. Hetzner could have written that description for today!

William D. Postell puts it succinctly: "There is a little bit of the clinician, the research worker, the medical historian, the medical philosopher, the bibliophile, as well as the custodian and the library technician, in each successful librarian" [3]. All of this remains true but is only part of what is required for today's librarian in the health sciences. The advent of automation with the subsequent development of the Internet and electronic resources added a new dimension to the qualifications needed for successful practice in the 1990s and beyond.

The health sciences librarian must have knowledge of the library systems, databases, and ways to integrate electronic resources into the library's information networks both within and outside the institution. Building knowledgebases, serving as a vital member of the health care team, and teaching methods of information retrieval and transfer to faculty, staff, and students are among the activities of the health sciences librarian. To the traditional qualities so aptly described by Hunt, Hetzner, and Postell must be added the training in medical informatics, knowledge of biomedical disciplines as a foundation for database building, skills in management, planning, and personnel techniques as well as grant writing and fundraising.

Just reading this list of attributes makes one weary, but it would be a mistake to say it cannot be done. For more than half a century, health sciences librarians have used those qualities in an environment that has changed and evolved and will certainly continue to do so. Much has happened in the past fifty years. A few of the major events in our history will illustrate why our profession has changed and how we have adapted our work to those changes.

World War II brought about great changes in our country. Returning from the war, thousands of veterans went to universities and entered professions. Innovations in medicine and surgery, spurred by wartime demands, brought new techniques, drugs, and specialties to the fore. If the library in a medical setting had at one time been a quiet and unhurried haven, it was no longer so.

When Sputnik went into space in October of 1957, Americans faced the fact that they were losing the space race. Congress took action and, suddenly, there was great interest in and support of science. The health sciences libraries of that period were woefully inadequate, as pointed out by the survey conducted by Harold Bloomquist. His report in 1963, based on a study of the status and needs of libraries in eighty-six medical schools, provided comprehensive data concerning the plight of the libraries.

He also described the arena of science of those times. The small national expenditure for medical research was only $45 million in 1940. Twenty years later, it was but $715 million. Professionals in medical research grew from 19,000 in 1954 to 40,000 in 1960, an increase of more than 100%. Standards for medical school libraries indicated a minimum of 100,000 volumes and between 1,200 and 1,500 journal titles. Fewer than one quarter of the medical school libraries met this standard [4].

The Bloomquist report, prepared for the National Library of Medicine (NLM), was instrumental in the adoption of the Medical Library Assistance Act (MLAA) in 1965, and, with MLAA's passage, great social and technological changes came about. There was funding for construction or expansion of library buildings as well as for collections and funding for educating and training librarians. With MLAA, came establishment of the Regional Medical Libraries, bringing new connections and services to libraries of all types.

In 1970, the American Hospital Association reported that 4,191 or 72% of community hospitals had libraries, but only 928 were served by professionally trained librarians. The MLAA certainly served as a stimulus to hospitals to offer library services to their staff. Between that time and 1984, the number of hospital librarians with professional degrees increased enormously [5].

Technology had long been on the horizon. It became a reality for libraries in 1964 when MEDLARS, an automated batch-mode searching of *Index Medicus*, made its appearance at the National Library of Medicine. By the time the SUNY Biomedical Communication Net-

work (BCN) went online with the Index Medicus in 1968, the database explosion was on its way. Little did we foresee what would develop. We did know that it was a historic moment in health sciences librarianship, and we never looked back. We had a valuable tool, and, as the only online searchers, we had established our domain.

Irwin Pizer detailed the development of the BCN in his Janet Doe Lecture of 1984. His vision brought us the first online bibliographic information retrieval system and, with it, a new direction in the practice of librarianship. Our work was changed forever [6].

The bubble burst, of course, when demand from our users required that we encourage them to learn to do their own searching. Many librarians resisted the move toward empowering users, but, as mediated searching diminished, another avenue of opportunity opened. We could and did become the teachers of database searching, and again our work changed. We were involved in curriculum planning, in preparing courses, and in expanding the visibility of the library and the librarian.

In 1971, a clinical librarian program was introduced by Gertrude Lamb at the University of Missouri, Kansas City. Here was another development in our profession, one that placed the librarian at the bedside along with the health care team. The clinical librarian used the enhanced knowledge of the patient to provide searches and literature for the team, making a difference in the quality of patient care. Building on that concept is the recent proposal for promoting the ''informationist'' as the individual who will participate in and provide information needed by the health care or research team [7].

Another major development came with publication of the Matheson/Cooper report in 1982. The recommendations had far-reaching goals. Just this one can serve as an example: ''the library should serve as the institution's bridge to external public databases by providing information about these sources,

providing access to them, and facilitating the flow of digital information and data between systems'' [8]. The report awakened the medical library community with a jolt. Here was a sweeping change, one in which the library would be required to leave its passive position and become a driving force in the institution. Some welcomed the plan with enthusiasm, some reacted with fear. But again, the way we were positioned in our institutions, the roles we played by partnering with other departments of the institution, brought another level of responsibility to the librarian and, hence, to the library.

Many other changes and developments have characterized the library world during the past fifty years. The whole realm of automation from the first clunky computer terminal to the vastness and capabilities of the Internet has put librarians on a speedway. There are wonderful, inventive possibilities in the information arena as well as grave concerns about the reliance on the computer by students and others who no longer find need for a library.

We have seen these and other changes become part of our experience. We have seen our profession challenged and downgraded. Our names have been many: cybrarian, Webmaster, informationist, information specialist, informaticist, and on it goes. But if a rose by any other name is still a rose, then a librarian by any other name is still the individual who has certain and special qualities and qualifications to perform in the digital or the traditional roles of the profession.

A thread runs through the history of libraries and the librarians who built, served, and maintained these institutions. That thread is our appreciation and understanding of the literature. The fundamental principles of the organization of knowledge have been impressed upon us in our graduate education. Libraries are not just buildings filled with volumes. Staffs are not just concerned with order on the shelves. Libraries are created to amass the sources of information

that can be used to build new knowledge. Librarians have this knowledge of organization, and it sets them apart from other information technologists. Librarians are grounded in the use of information: how to retrieve it, how to funnel it, how to verify it, how to evaluate it, and how to translate it into new knowledge. We are both the scholars and the purveyors of scholarship. Today, the use of technology is so much emphasized that the wonders of the digital environment often overshadow other activities.

But librarians are also concerned with the record of knowledge, the artifacts of knowledge, the history of progress. We can see and use the manuscript, the broadside, the letter, and the drawing along with the book, the journal, and the database in offering the treasures of knowledge to our users. We can, at the same time, scan a myriad of databases, call up electronic journals, surf the Internet, and compile these diverse pieces into a tapestry for the historian, writer, or student.

When you ask a class of medical students today if they have used the print *Index Medicus,* not a hand is raised. Yet, when you relate the story of the healthy young woman volunteer who died recently during a clinical trial because the investigators had not searched the literature before 1966, they are stunned [9, 10]. We know how to find literature of the past, but our users do not. Too many of our students and faculty are willing to take whatever is found on the Web as sufficient. Here is the opportunity to use our skills as teachers and knowledge builders to show the value of the whole realm of resources. It is our opportunity, again in an era of change, to correlate and incorporate resources in such a way that format will not be the only basis of choice.

Those early librarians who described our attributes talked about our having fundamental knowledge, understanding how scientists use literature, and being involved in the research process. Knowing the literature—how it is formed,

how it is organized in a structured way, and how it can be used to move ideas forward—remains the base of our profession. What we can, and do, contribute to the learning process is valuable, because it enhances the understanding of students that learning is the one constant; valuable to our clinicians and researchers, because we corral the best sources and deliver the content to the bench and the bedside.

A decade ago, we did not envision a PubMed on the Internet free for use by all in the world. We had not experienced all the challenges to copyright law and to publishing brought on by the rapidly expanding digital environment. But we did know that our fundamental responsibilities are to create an environment where learning takes place, where information can become knowledge, and where skills in establishing patterns for lifelong learning are developed. As long as these remain at the core of our practice, librarians will have a vital role. Adapting to change has made us flexible, and our wont to provide service has not faltered.

We are, after all, librarians.

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References

1. HUNT JW. The medical library: development—distribution—administration. In: Doe J, ed. A handbook of medical library practice. Chicago, IL: American Library Association, 1943:30.

2. HETZNER BN. The medical librarian. In: Annan GL, Felter JW, eds. Handbook of medical library practice. 3d ed. Chicago, IL: Medical Library Association, 1970:16–7.

3. POSTELL WD. An essay on the ''precepts'' of medical librarianship. Bull Med Libr Assoc 1947 Jan;35(1):6.

4. BLOOMQUIST H. The status and needs of medical school libraries in the United States. J Med Educ 1963 Mar; 38(3):146–8.

5. PALMER RA. Effect of federal programs on health sciences libraries. J Am Soc Inform Sci 1987 Jan;38(1):40.

6. PIZER IH. Looking backward, 1984–1959: twenty-five years of library automation—a personal view. Bull Med Libr Assoc 1984 Oct;72(4):343–4.

7. ARCARI R, LAMB G. The librarian in clinical care. Hosp Med Staff 1977 Dec; 6(12):18–23.

8. MATHESON NW, COOPER JAD. Academic information in the academic health sciences center: roles for the library in information management. J Med Educ 1982 Oct;57(10 Pt 2):74.

9. MARSHALL E. Clinical research. procedures faulted in fatal asthma trial. Science 2001 Jul 20;293(5529):405–7.

10. MCLELLAN F. 1966 and all that—when is a literature search done? Lancet 2001 Aug 25;358(9282):646.